

Work Order ID 67528

Monday, March 28, 2011 9:12:53 AM



Page 1

Item ID: D205-634-041

Accept



Setup Start



Revision ID:

Stop



Item Name: Replacement Skidtube

Start Date: 3/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 4/12/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

11-03-28

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D2580-041

Rev.D DEO-D1

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG003

CHG002

(welder S)

8/11/14

H. J. Clark CL 11-5-11

110

0.00



BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio 16

2-Cut tubes as per Dwg. D2580

3- scribe batch# in aft end of tube



11-3-31

B67528

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Start Date: 3/28/2011 Start Qty: 1.00



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Customer:

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

120

0.00



Skidtubes

Memo

0.00

Skidtubes

1- Deburr ends and remove bending marks

2- Prepare tube for swaging as per QSI 002

11-4-1

130

QC5- Inspect part completeness to step-on W/O

0.00



QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES						
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Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

0.00



Skidtubes

Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and QSI004
A/R□□□ Aluminum Rod*MI16577 BE 11/04/01*

2-Grind welds on step as per Dwg D2580

3-Insert D4202-1 spacer, swage as per QSI002 and trim/ grind flush per QSI002
and dwg. Hold x-bolt with DT9701 Use tube expander 1/2 x 17G to start
expansion and finish with 1/2 x 18G to achieve dwg dimension.4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",
adjust stopper not to hit web. Debur

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Debur

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Debur

*WELDED BE 11/05/04
A/R MI16577 Pro →
BE 11/04/04**BB 11/05/04*

150

0.00



QC

Quality Control

QC10- Inspect visual per QSI004- ground welds

Memo

0.00

8 11/05/05

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-634-041 PAR #: N/A Fault Category: Seal tube NCR: Yes No DQA: N/A Date: 11/05/13
 Resolution: Reswork Disposition: Reswork QA: N/C Closed Date: 11/05/13

NCR: 67528		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/04/04	# ND	Found at inspection that this tube has Qty = 9 cross bolt spacer with cracks in them.	WJ 11/04/04	- Remove cross bolt spacer in these holes: 7th, 10th, 13th, 14th, 15th, 16th, 18th, 19th, 20th	BE 11/04/04	N/A 18	WJ 11/04/04	WJ 11/04/04
		R.C. Process / Swagm		→ re swag D#2202-1 B 6743025 → re inspect	BE 11/04/04			
11/04/05	# F40	Found that the x-bolt spacer are still crackin. R.C. Process	WJ 11/04/05	Remove all spacer. Counter sink all holes and prepare for welding Weld in new x-bolt spacer	BE 11/05/03 BE 11/05/03 BE 11/05/04			

NOTE: Date & initial all entries

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Start Date: 3/28/2011 Start Qty: 1.00

Required Date: 4/12/2011 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start _____
Stop _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

160 QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

170 Pressure Wash per QSI005 4.3

0.00



Hand Finish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI005 section 4.1.2.1 do not acid etch and leave fwd
cap out of solution.

7m-l 11/05/05

180 White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME:
OVEN TEMPERATURE:
FINISH TIME:9:40
320 OF
10:10

M116964

IX & m-l 11/05/06

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 0 All ulos for

W/O:		WORK ORDER CHANGES						
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Item Name: Replacement Skidtube

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Start Date: 3/28/2011 Start Qty: 1.00



Cust Item ID:

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Customer:

Reference:


Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
	HandFinish					1	0	20	relostoe
Hand Finishing	<div><div>Memo</div><div>0.00</div><div>1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates A/R <input type="checkbox"/> <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> 1116945 Sikaflex expire date: 12/01</div><div>2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580</div><div>3-Inspect for foreign object per QSI 024</div><div>4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive A/R <input type="checkbox"/> <input type="checkbox"/> Sikaflex-291 <input type="checkbox"/> 1116945 Sikaflex expire date: 12/01</div><div>5-Wing Walk as per Dwg D2580 and QSI 005 4.4 Batch: 1117315</div></div>								

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 67528

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Item ID: D205-634-041

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Revision ID:

Item Name: Replacement Skidtube

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Start Date: 3/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 4/12/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024	0.00 0.00				<u>11/05/09</u>			
220 Packaging Packaging Packaging	Packaging Memo Identify and pack for shipping as per PPPD205-634-041 Location: _____ PPP Rev: <u>K</u>	0.00 0.00				<u>11/5/11</u>			
230 QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00				<u>11/5/11</u>			

MF
11-05-11

W/O:		WORK ORDER CHANGES						
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Picklist Print

Monday, March 28, 2011 9:12:59 AM

Page 1

Work Order ID: 67528

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube




Start Date: 3/28/2011

Required Date: 4/12/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
KJ IPP Rev P 10.02.19
per PAR09-043 EC verified by:DD
IPP Rev. O 06.02.28 Added paperwork EC
IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1  Spacer		Manufactured	No			140	Each	303.0000	20	20			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG002				303					
				66929				106					
				67129				196					
				67308				1					
D2580-1  205 Skidtube bent detail		Manufactured	No			110	Each	0.0000	1	1			
D2576-3  Step (maching detail)		Manufactured	No			140	Each	17.0000	1	1			
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				LG				17					
				52215				17					

BE 11/04/04
B 67430 x20
D2579 B68737
x20
BE 11/05/04
DP 11-3-31
BE 11/04/04

B67431

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

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Work Order ID: 67528

Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 3/28/2011

Required Date: 4/12/2011

Start Qty: 1.00

Required Qty: 1.00

D2855

Manufactured No

200 Each

78.0000 1 1



Cap



Handwritten: 11/05/09

Location

Loc Qty

Loc Code

FP007

78

53791

41

65519

2

65569

35

Handwritten: x1

AN3-5A

Purchased No

200 Each

446.0000 2 2



Bolt



Handwritten: 11/05/09

Location

Loc Qty

Loc Code

FP-B

5

115016

5

ST350

441

115371

300

116632

141

Handwritten: x2

AN960JD10L

NAS1149D0332J

Purchased No

200 Each

0.0000 2 2



Washer



Handwritten: (x2) 11/05/09

ALS7-1032-130

Purchased No

200 Each

755.0000 50 50



Insert



Handwritten: 11/05/09

Location

Loc Qty

Loc Code

ST282

755

116800

755

Handwritten: 1117331

Handwritten: x50

W/O:		WORK ORDER CHANGES						
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Page 3

Work Order ID: 67528

Parent Item: D205-634-041


Parent Item Name: Replacement Skidtube

Start Date: 3/28/2011

Required Date: 4/12/2011

Start Qty: 1.00

Required Qty: 1.00

AN3C4A	Purchased	No	200	Each	122.0000	50	50
							
BOLT							

Location

Loc Qty

Loc Code

ST350

122

M117313

x50

116924

122

AN960C10L NAS1149C0332 Purchased No

200

Each

0.0000

50

50



washer

M117291



(x50) M 4/05/09

D3566-13 Manufactured No

200

Each

35.0000

1

1



Gasket



M 4/05/09

Location

Loc Qty

Loc Code

FP014

35

x1

66550

35

D3566-5 Manufactured No

200

Each

11.0000

1

1



Gasket



M 4/05/09

Location

Loc Qty

Loc Code

FP015

11

1367589

v1

66552

11

D3566-1 Manufactured No

200

Each

8.0000

2

2



Gasket



M 4/05/09

Location

Loc Qty

Loc Code

FP011

8

1368344

x2

67496

8

Monday, March 28, 2011 9:13:00 AM

Shop Packet Print

Page 3

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Parent Item: D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 3/28/2011

Required Date: 4/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3564-11

Manufactured No

200

Each

11.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP019

11

B68350

66154

11

xl

D3564-13

Manufactured No

200

Each

46.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP017

46

66136

19

66549

9

66805

18

xl

D3564-9

Manufactured No

200

Each

8.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FP019

8

66153

8

B67590

xl

D3564-5

Manufactured No

200

Each

18.0000

1

1



Wearshoe

Location

Loc Qty

Loc Code

FG

2

34806

2

FP019

16

66551

16

xl

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Shop Packet Print

Page 4

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Parent Item Name: Replacement Skidtube

Start Date: 3/28/2011

Required Date: 4/12/2011

Start Qty: 1.00

Required Qty: 1.00

D2594-3

Manufactured No

200 Each

492.0000 16 16



O-Ring, 205 Skidtube



all u105109

Location

Loc Qty

Loc Code

FP-A

492

65518

492

x16

D2594-1

Manufactured No

200 Each

519.0000 16 16



Plug, 205 Skidtube



all u105109

Location

Loc Qty

Loc Code

FP-A

519

42807

28

66122

244

66932

240

67441

7

x16

W/O:		WORK ORDER CHANGES						
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DART**RELEASED**
07-06-28 #**DEO ATTACHED**

DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2580	REV. D SHEET 1 OF 3
DATE 07.02.27		TITLE 205 SKIDTUBE ASSEMBLY	SCALE NTS
A	96.09.16	NEW ISSUE	
B	96.12.02	AS MANUFACTURED	
C	98.08.26	REDRAWN, INCLUDED DEO 9094/9097	
D	07.02.27	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/9183	

QTY -041	QTY -045	Part Number	Description
X		D2580-041	SKIDTUBE ASSEMBLY
	X	D2580-045	SKIDTUBE ASSEMBLY
1	1	D2500-1-190	EXTRUSION
1	1	D2576-3	STEP
20	24	D2579	CROSS BOLT SPACER
16	16	D2594-1	PLUG
16	16	D2594-3	O-RING
1	1	D2596	205 WEB
1	1	D2855	AFT CAP
1	1	D3564-5	WEARSHOE
1	1	D3564-9	WEARSHOE
1	1	D3564-11	WEARSHOE
1	1	D3564-13	WEARSHOE
2	2	D3566-1	GASKET
1	1	D3566-5	GASKET
1	1	D3566-13	GASKET
50	50	ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
50	50	AN3C4A	BOLT
2	2	AN3-5A	BOLT
50	50	AN960C10L	WASHER
2	2	AN960JD10L	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 67528

pl/11-03-28

GENERAL NOTES:

- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 2) ALL DIMENSIONS ARE IN INCHES
- 3) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 4) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 5) USE DART DRILL TEMPLATE TD2577-205 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTION D-D (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND AN960C10L WASHERS WITH SIKAFLEX-241/-291.
- 6) WELDING TO BE DONE PER DART QSI 004.
- 7) FINISH:
SEE NOTES ON
PAGE 2 FOR D2580-041 AND
PAGE 3 FOR D2580-045
- 8) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES).

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W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O:		WORK ORDER CHANGES						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

RELEASED
07-06-28

DEO ATTACHED

Ø0.208

DRILL PRIOR TO D2855 CAP
INSTALLATION (2 PLACES)

AN3-5A BOLT (1)
AN960JD10L WASHER (1)
(2 PLACES)

D2855 CAP

SEAL WITH
SIKAFLEX-241/-291

SEE NOTE II)

0.40

Diagram of a circular web assembly. Labels include: D2579 SPACER, D2596 WEB (REF), and ALST-1032-130 (REF) (TYP 50 PLACES). A note indicates: AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR #0.508 HOLES ONLY. A list of instructions follows: 1. CHAMFER HOLE 0.050 x 45°, 2. INSERT D2579 SPACER (20 PLACES), 3. WELD INTO PLACE AND GRIND FLUSH, 4. C'BORE D2579 SPACER TO #0.437 x 1.00 DEEP.

i) FINISH: ACID ETCH, ALODINE PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ENTIRE ASSEMBLY GREEN (REF. 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4

ii) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE
WITH THE SPACER AT THIS LOCATION

[illegible]

Technical drawing of a horizontal curve showing dimensions and callouts. The drawing includes a horizontal line representing the curve, with various dimensions and callouts. Key dimensions include: 5.985, 5.338 (REF), 51.340, 39.580, 5.915, 3.630 (REF), 20.0, 1.4, 1.0, 13.4, 32.0 ± 1.0, and 11. Callouts include '4' and '0.640'. The drawing is labeled 'MAKE FROM D2580-1 DRILLING DETAIL'.

WELD AS PER DETAIL F

BLACK ANTI-SKID TO 0.5 ABOVE LOCATION RIDGE

NO C'BORE NO PLUG

NO C'TORE NO PLUG

REFER TO DETAIL G

0.5

1.5

H

P P P P P P P

D3566-1

D3566-5

D3566-1

D3566-13

D3564-11

D3564-5

D3564-9

D3564-13

AN3C4A BOLT (1)

AN960C10L WASHER (1)

(50 PLACES)

DESIGN

DRAWN BY

DESIGNED BY

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PERSON WITHOUT WRITTEN PERMISSION FROM
DART AEROSPACE LTD.

DESIGN	DRAWN BY		DART AEROSPACE LTD. HARRISBURG, ONTARIO, CANADA
<i>RH</i>	<i>RH</i>		
CHECKED	APPROVED	DRAWING NO.	REV. D
<i>HA</i>	<i>HA</i>	D2580	SHEET 3 OF 3
DATE	TITLE		SCALE
07.02.27	205 SKIDTUBE ASSEMBLY		1:24

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DRAWING NO. D2580	TITLE 205 SKIDTUBE ASSEMBLY	REV. D	DART AEROSPACE LTD ENGINEERING ORDER		D.E.O. NO. D2580-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>L</i>	MFG. APPR. <i>R</i>	APPROVED <i>MP</i>		DE APPR. <i>H</i>		
DATE 10.09.22	DATE 10.11.04	DATE 10.11.04	DATE 10/11/04		DATE 10.11.04		

PURPOSE:

CHANGE ALL WELDED CROSSBOLT SPACERS TO SWAGED SPACERS

CHANGE:

PARTS LIST IS AMENDED AS FOLLOWS:

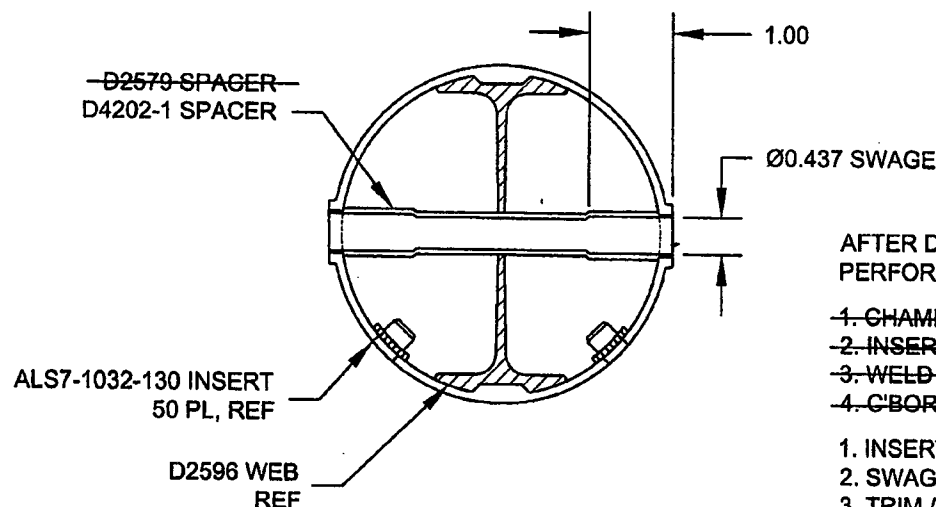
WAS

QTY	QTY	PART NUMBER	DESCRIPTION
-041	-045		
20	24	D2579	CROSS BOLT SPACER

IS

20	24	D4202-1	SPACER
----	----	---------	--------

SECTION D-D & SECTION H-H ARE AMENDED AS FOLLOWS:



SECTION D-D
NOT TO SCALE

SECTION H-H
NOT TO SCALE

RELEASED
2010-11-18
MP

AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:

1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C-BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

1. INSERT D4202-1 SPACER, 20 PL (-041) OR 24 PL (-045)
2. SWAGE TO Ø0.437 X 1.00 DEEP PER QSI 002
3. TRIM / GRIND FLUSH PER QSI 002

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Linda Lacelle

From: Mike Petsche <mpetsche@dartaero.com>
Sent: April 18, 2011 10:42 AM
To: 'Linda Lacelle'; dshepherd@dartaero.com
Cc: 'Bill Beckett'; 'Chris Provencal'; 'Eric Charbonneau'
Subject: RE: Alum. Solution Anneal - swaging

Well I'm not sure what to say.

It is my understanding that the swaging will still make sense even with the extra hoops we need to jump through.

If there is still uncertainty on the delivery of the material, we CAN still weld them if we need to.

And while this might be less than "world class", couldn't we take some of our tubing that we have in stock and zap it with the welder to knock down the temper a little? Ground clamp on one end, torch on the other.....BZZZZZZT.

(I'm only sort of joking....because I bet it would work)

From: Linda Lacelle [mailto:llacelle@dartaero.com]
Sent: April 18, 2011 9:44 AM
To: dshepherd@dartaero.com; 'Mike Petsche'
Cc: Bill Beckett; Chris Provencal; Eric Charbonneau
Subject: RE: Alum. Solution Anneal - swaging
Importance: High

So any thoughts about going fwd for now with 205's? We are down to 6, and I don't want to run out as we have orders for these for early May.

LL

From: Linda Lacelle [mailto:llacelle@dartaero.com]
Sent: April 12, 2011 8:11 AM
To: dshepherd@dartaero.com; 'Mike Petsche' (mpetsche@dartaero.com)
Cc: Bill Beckett (bbeckett@dartaero.com); Chris Provencal (cprovencal@dartaero.com); Eric Charbonneau (echarbonneau@dartaero.com)
Subject: FW: Alum. Solution Anneal - swaging

So if we send them 400 pcs of the 6061T6 tube, they can temper it to T4 for a cost of 1850.00...

LL

From: John Spencer [mailto:johns@metcor.biz]
Sent: April 12, 2011 8:04 AM
To: llacelle@dartaero.com
Subject: Alum. Solution Anneal

Linda,
Metcor could process the tubes within a few days after receiving.
Price for the lot is \$1850 including conductivity test.
Would prefer 8 inch cut to length, if not we could manage 4 " lengths .
Please let me know and contact me on my cell.

DS79
9

Linda Lacelle

From: dshepherd@dartaero.com
Sent: April 18, 2011 11:36 AM
To: Linda Lacelle; Mike Petsche
Cc: Bill Beckett; 'Chris Provencal'; 'Eric Charbonneau'
Subject: Re: Alum. Solution Anneal - swaging

Makes sense to me ... We don't want to get caught short ... Make sure that if we do this, they are identified with the old CHG number.

David

Sent from my BlackBerry device on the Rogers Wireless Network

From: "Linda Lacelle" <llacelle@dartaero.com>
Date: Mon, 18 Apr 2011 11:21:10 -0400
To: 'Mike Petsche' <mpetsche@dartaero.com>; <dshepherd@dartaero.com>
Cc: 'Bill Beckett' <bbeckett@dartaero.com>; 'Chris Provencal' <cprovencal@dartaero.com>; 'Eric Charbonneau' <echarbonneau@dartaero.com>
Subject: RE: Alum. Solution Anneal - swaging

I am ready to weld some up, I don't want to get into trouble with L/T's on these, any objections??
LL

From: Mike Petsche [mailto:mpetsche@dartaero.com]
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Cc: 'Bill Beckett'; 'Chris Provencal'; 'Eric Charbonneau'
Subject: RE: Alum. Solution Anneal - swaging

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CHG ⁰⁰⁷ ~~008~~

D2579

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Please let me know and contact me on my cell.*

Regards,

John Spencer

Metcor Inc.
Nadcap Certified
johns@metcor.biz
514-386-1620

NO. 249

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 67531
Part number: D205 634 041
Description: 205
Welding Process: Tig ☒ Mig ☐
Base material: Aluminum
Current: AC ☒ DC ☐

TEST REQUIREMENTS AND RESULTS

Visual: pass ☒ fail ☐
Penetration: pass ☒ fail ☐

UNACCEPTABLE

Cracks: pass ☒ fail ☐
Undercut: pass ☒ fail ☐
Pin holes: pass ☒ fail ☐
Overlap (cold lap): pass ☒ fail ☐
Porosity (surface): pass ☒ fail ☐
Coloration: pass ☒ fail ☐

Qualifier Pat Lewis Date of Test Coupon 11.04.25

Welder Barclay Elliott Date of Test Coupon 11.04.25

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

